



UNITED STATES PATENT AND TRADEMARK OFFICE

*nm*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,805	02/13/2001	Peter G R Smith	124-838	9678

7590 12/12/2002  
Nixon & Vanderhye  
8th Floor  
1100 North Glebe Road  
Arlington, VA 22201-4714

EXAMINER

ZARROLI, MICHAEL C

ART UNIT	PAPER NUMBER
----------	--------------

2839

DATE MAILED: 12/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**. Office Action Summary**

Application No.

09/762,805

Applicant(s)

SMITH ET AL.

Examiner

Michael C. Zarroli

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 9-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 and 12 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-7, 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- u c b  
12/10/02
2. Claim 1 <sup>is</sup> ~~are~~ rejected under 35 U.S.C. 103(a) as being unpatentable over Booth et al in view of Mallinson.

Booth discloses an optical waveguide (fig. 8) with a guiding lamina (1) of optical material (col. 5 line 28) bonded to a superstructure lamina (14) of optical material (col. 6 line 59). A second superstructure lamina (18) is also bonded to the guiding lamina. A light path (7) is defined by the guiding lamina. Booth also discloses modified (7) and unmodified optical regions (11) of the guiding lamina.

In regard to bonding the layers with direct interfacial bonding, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight. It is well settled that the presence of process limitations in product claims, which limitations do not otherwise distinguish the current article over the prior art,

cannot impart patentability to that product. (*In re Johnson*, 157USPQ 670, 1968) also (*In re Thorpe*, 227USPQ 964, 1985) Applicant also states in the specification that direct interfacial bonding is well known in the art (second sentence).

Booth does not disclose that the light guiding path is the unmodified region and the modified region is the boundary of this path.

Mallinson discloses an optical waveguide with superstructure lamina and, a light guiding path that is an unmodified region while the boundary of this light guiding path is the modified region (col. 7 lines 35-45).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to make the modified light path region of Booth an unmodified region bounded by modified regions. It has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

### ***Response to Arguments***

3. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's arguments filed 10/25/02 have been fully considered but they are not persuasive.

The examiner does not agree with the applicant's argument about "interrelationships" between claimed elements. Applicant admits interfacial bonding is a known technique for manufacturing waveguides. Applicant has not shown any new features or results when interfacial bonding is used as apposed to the other "known" methods for making an optical waveguide. Interfacial bonding could be replaced by another "known technique." The applicant has not shown that the bonding affects the index of refraction of the waveguide materials.

In response to applicant's argument that the primary reference (Booth et al) could not be used to show known features of the applicant's claims, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). This primary reference is only being used to show that most of the structure of the applicant's invention recited in claim 1 (superstructures, guiding lamina and modified/unmodified portions) is old in the art.

***Allowable Subject Matter***

5. Claims 11-12 are allowed over the prior art of record.
6. Claims 2-7 and, 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter that was not discussed in previous office actions: Modified regions formed by indiffusion of one or more dopant materials into the guiding lamina. At least part of the modified regions forms the light guiding path. A “means for launching” an input optical signal into the waveguide.

***Conclusion***


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Herbrechtsmeier et al teaches a waveguide with an unmodified region for a light path. Dieckroeger et al teaches in figure 7 an unmodified region (N<sub>0</sub>) that is a light guiding path. Dieckroeger cannot be used as prior art because of its priority date.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Zarroli whose telephone number is 703-305-0608. The examiner can normally be reached on 7:30 to 3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Feild can be reached on (703) 308-2710. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
Michael C. Zarroli  
Examiner  
Art Unit 2839

  
MCZ  
December 10, 2002